



The California FACE Program

Occupational Health Branch
California Department of Public Health

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BACKGROUND

- On June 10, 2020, an excavation operator (trainee) died after being struck by a bucket that disconnected from the automatic coupler.
- On June 18, 2020, a laborer died after being struck by a bucket that disconnected from the automatic coupler and landed in the trench he was working in.

Federal OSHA Fat/Cat reports

Year	State	Incident
2019	WI	Excavating storm sewer; CAT excavator and CB linkage
2014	AZ	Installing concrete pipe; CAT excavator and JRB coupler
2012	NV	Bolting backflow preventer; Komatsu excavator and JRB coupler
2009	NC (2)	Working in trench killed by failure of quick coupler
2007	CA	Working in trench; Link Belt excavator

Laborer Dies After Being Struck by Detached Excavator Bucket

Wisconsin Case Report 03WI003

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Surface Nonmetal Mine
(Crushed, Broken Stone)

Fatal Machinery Accident
July 17, 2019

Northeast Aggregate Corporation
Northeast Aggregate Corporation
Swanton, Franklin County, Vermont
ID No. 43-00585

Case # 1

- A construction heavy equipment operator (trainee) died after being struck by an excavation bucket that came loose from the quick coupling device attached to the end of the boom.
- After removing two loads of dirt from a trench, the decedent swung the boom of the excavator over to the side and exited the cab, leaving the boom elevated. As he was walking toward the boom, the bucket detached from the quick coupler and fell to the ground striking him.

Quick Coupler Description

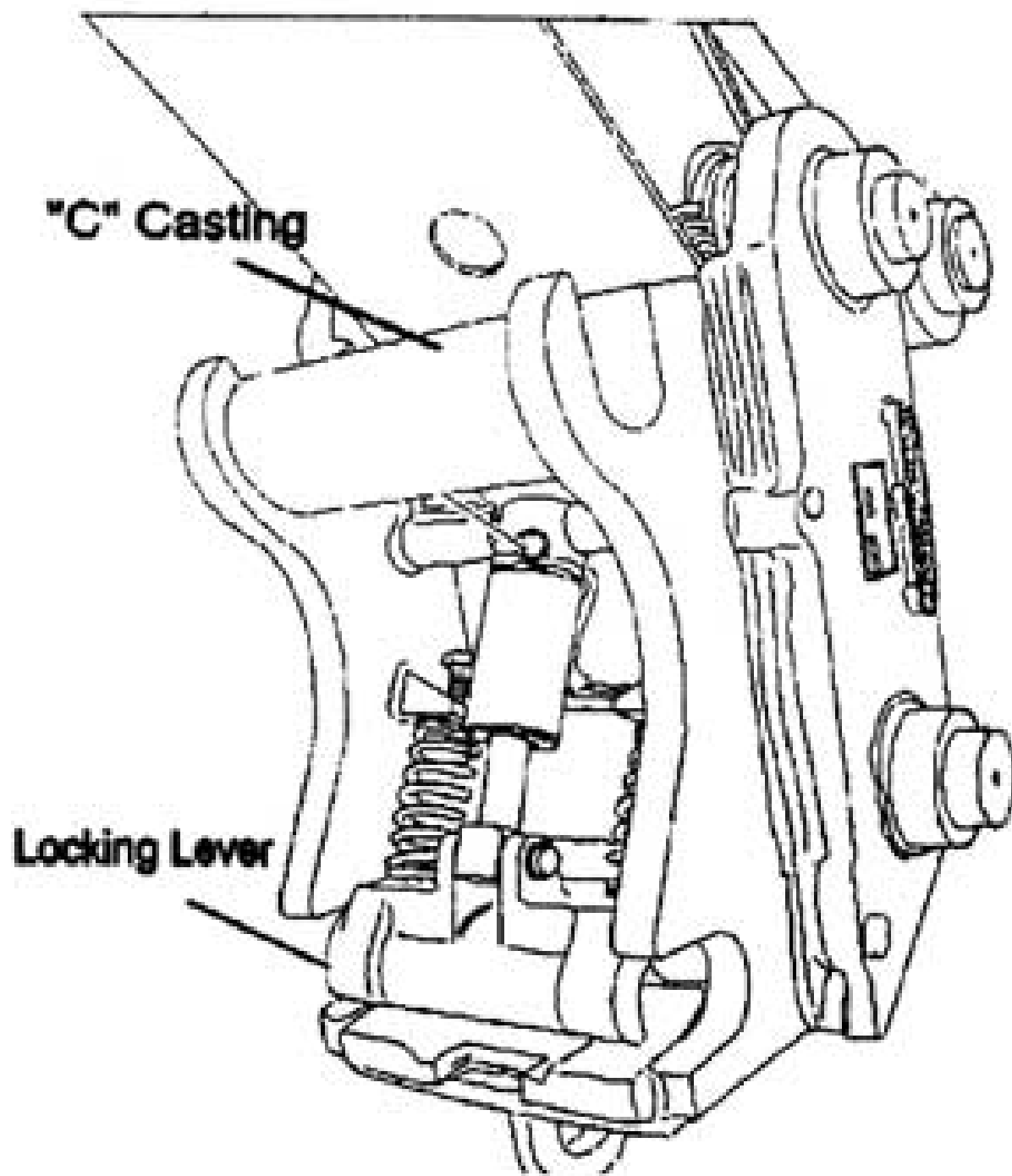
- Quick couplers are after-market devices, made by various manufacturers, that are installed at the outer end of booms on various types of construction and earth-moving machines.
- They facilitate the rapid exchange of working tools or buckets.

Quick Couplers, cont'd

- They are usually mounted on the machine by means of the pins that would otherwise be the mountings for the bucket or attachment.
- The method of operation (picking up and releasing of buckets and attachments) determines the design of the coupler. There are many variations in the design of quick couplers.



JUN 28 2005











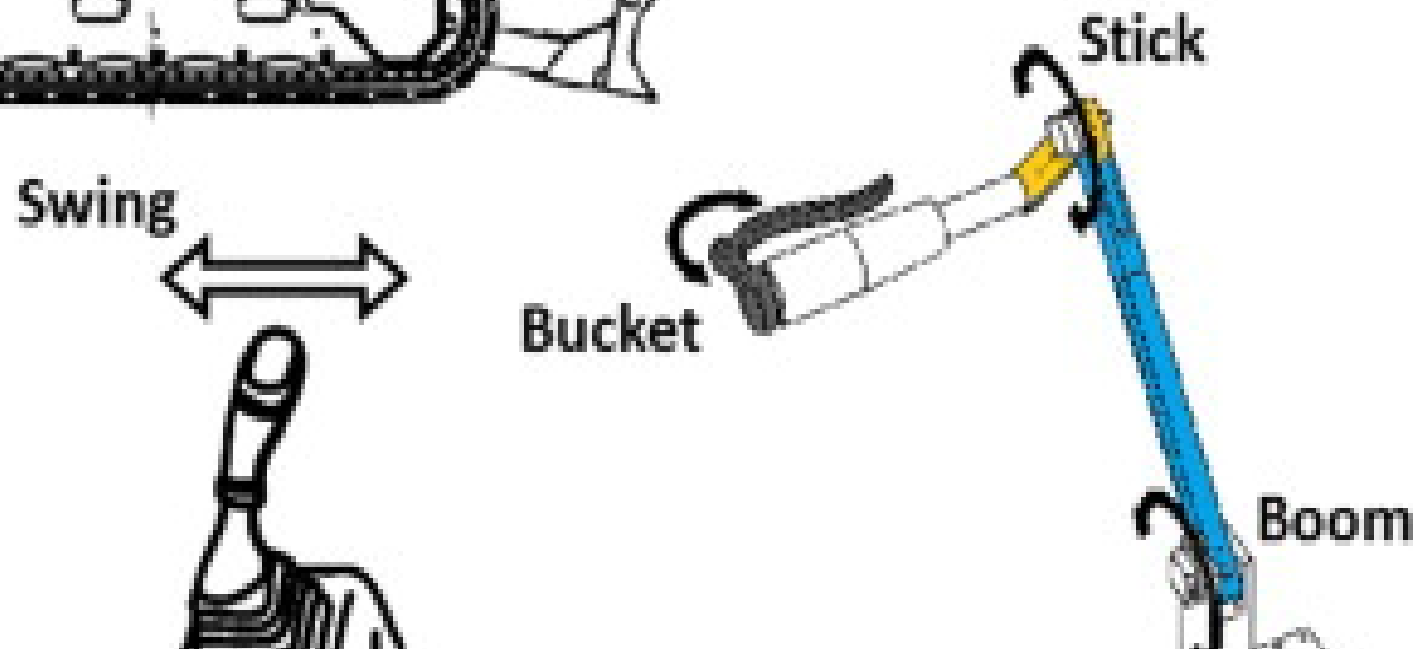
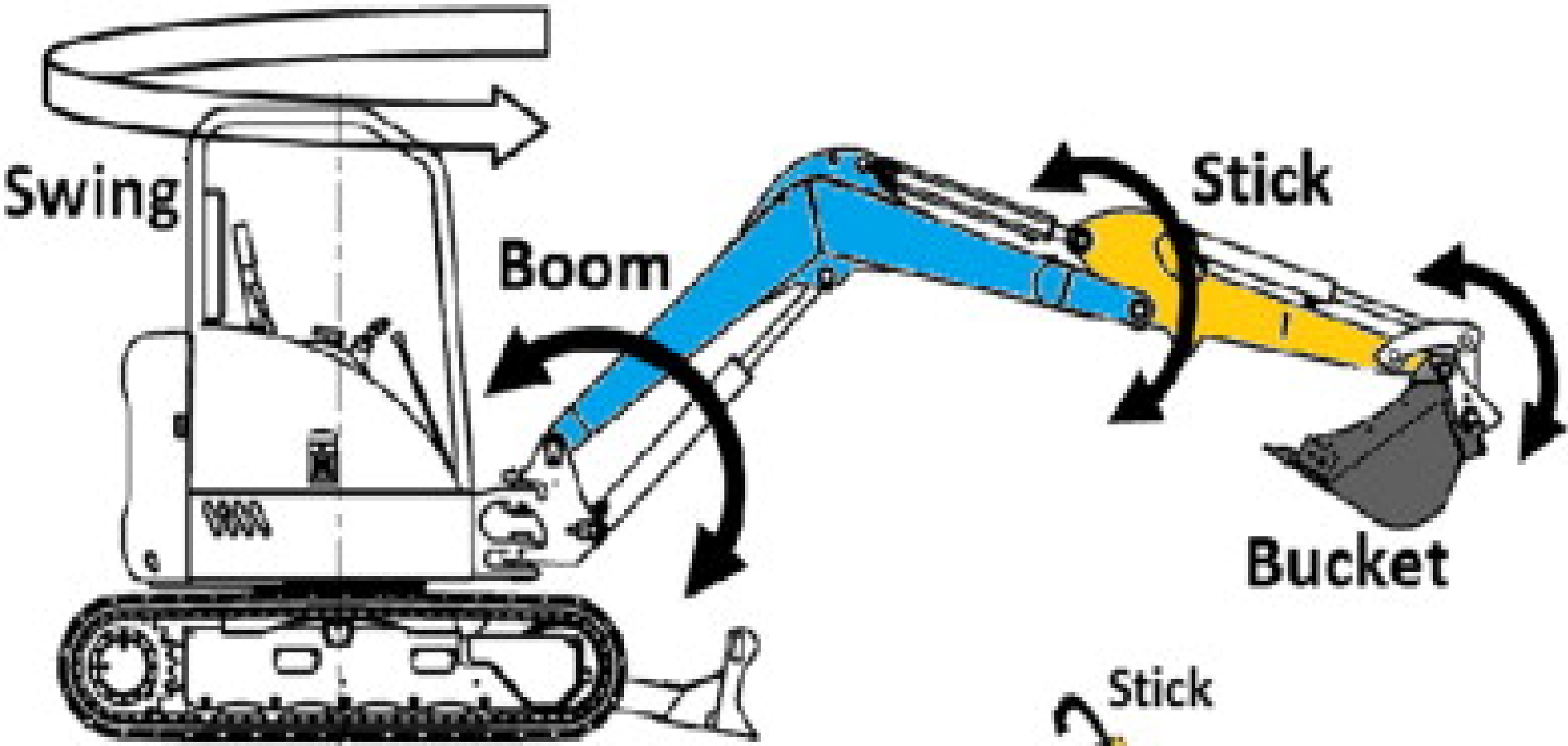
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THE PERFECT FIT



Case #2

- A construction laborer, working in a trench, died after being struck by an excavation bucket that came loose from its quick coupler.
- The operator of the excavator was curling the bucket into the boom when the bucket came loose, hitting the ground and then bouncing into the trench where the victim was working.













RECOMMENDATIONS

- Operators should always lower the bucket to the ground before exiting the cab and never traverse beneath the boom of the excavator or an elevated load.

In addition, employers should:

- Follow the manufacturer's recommendations for maintenance and inspection of the quick coupler to prevent a malfunction of the quick coupler that could cause an unintended release of the attachments.

RECOMMENDATIONS

- Train workers in the proper use of quick couplers: making visual inspections; procedures for engaging attachments; and methods for testing connections.
- Require workers to use the proper procedures for engaging excavation attachments and incorporating the procedures into the company's safety and health program.